

# F. A. S. NEWSLETTER

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M. Stanley Livingston, Chairman

----- to provide information  
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No. 54 - 7

August 16, 1954

## A - E BILL RECOMMITTED

The current Atomic Energy bill's stormy career in the Senate was climaxed on August 13, when the upper house returned it to conference once again because of objections to the bill's patents and electric power provisions. The House had accepted the compromise measure of the Conference Committee Aug. 9.

The bill seeks to amend the McMahon Act of 1946 so as to accomplish 3 objectives: (1) increase cooperation with our allies by permitting exchange of information regarding industrial, non-military, and research uses of atomic energy, and by allowing transfer of "restricted data" on the utilization of atomic weapons; (2) improve the security procedures for the control of atomic information; and (3) provide for the participation of private industry in the domestic development of peacetime atomic power. The loudest Senatorial objections were raised to the sections of the bill that sought to implement the third objective.

**DIXON-YATES** The prolonged debate on the bill itself was presaged by the controversy over the Dixon-Yates contract, entered into by the Atomic Energy Commission at the direction of the President. This \$105,000,000 contract provides that the Middle South Utilities, Inc. and the Southern Co. (the Dixon-Yates combine) shall build a steam-operated generating plant at West Memphis, Ark., to feed 600,000 kilowatts into the TVA system to replace power being drawn by the Paducah, Ky., facility of the AEC. During the 25-year term of the contract, the private firm would be free of federal income taxes.

Opposition to the contract stemmed from the fact that no competitive bids had been called for, that the tax arrangement was practically a guarantee of risk-free profit, and that it would save money for the government to extend existing TVA facilities instead. Congressional sanction was given the contract by passage of an amendment enabling the AEC to contract for power to be used in its own plants or for replacement. Proponents of the contract point out that it frees the government from a million dollar investment, and that steam-plant construction by TVA has been opposed by Congress. The President feels that further TVA expansion should be considered, and that the possibility of investing federal funds in power development in some other regions be surveyed. The extent of presidential authority over the AEC was brought into question in connection with the contract, since three members of the AEC had opposed it.

### **POWER CONTROVERSY**

On the floor of the Senate, the power controversy centered about the provisions of the bill regarding patent policy. The bill permits the AEC to license qualified firms to use nuclear materials and to own and operate nuclear reactors for the production of electric power. Uranium fuel is to be leased to the licensee and plutonium bred in the reactors is to be purchased by the AEC, since the bill provides that the government is to retain ownership of all "special nuclear material." An amendment introduced by Sen. Johnson (D, Col.) would have given the AEC and other federal agencies permission to build power plants under the same licensing provisions. The House-Senate Conference Committee, however, limited the AEC to building plants to demonstrate the practicability of atomic power, and permitted other agencies to build such plants only as "yardsticks" for private industry. Another amendment provides that publicly owned distribution systems and cooperatives would get preference on the power produced in such

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## DEFENSE R & D SCRUTINIZED

A subcommittee of the House Government Operations Committee has warned the Defense Department that its organization and administration of military research and development programs needs correction and may require major revision. On July 28, the Subcommittee on Military Operations, headed by Rep. R. Walter Riehlman (R, N.Y.), released an intermediate report on the subject based on 1500 pages of testimony taken in executive session from 20 principal witnesses on 12 separate days.

**PURPOSE** According to the introduction to this report, "the subcommittee undertook this inquiry with a strong conviction that the superiority of our military preparedness program might be dangerously jeopardized if maximum utilization was not being made of our civilian scientific resources. ... Its interest is (1) to insure that no obstacles real or apparent will discourage our best scientific minds from taking an active part; and (2) to air in open discussion some of the issues in research and development which appeared to the subcommittee to be causing considerable concern to our scientific community."

Witnesses heard included representatives from the Dept. of Defense at the secretary level, present and former employees of operational activities of the Defense Dept., and "5 distinguished civilian scientists and administrators of scientific programs," namely, John VonNeumann of the Institute for Advanced Study; A. G. Hill, director of Lincoln Laboratories; William Webster, vice president, New England Electric System; James R. Killian, president of MIT; and Vannevar Bush, president of Carnegie Institution of Washington. In addition, the subcommittee solicited by letter the views of "approximately 50 of the Nation's distinguished scientists and science administrators throughout the country."

### **CONCLUSIONS OF REPORT**

In its general conclusions the subcommittee states: "The subcommittee concludes that there are characteristics inherent in military organization which make it difficult to administer an effective program of scientific research and development. However, the subcommittee does not feel that these inherent characteristics are so inflexible or formidable that military administration must inevitably be considered incompatible with the successful operation of scientific research and development programs. ...

"This subcommittee does not believe that it should recommend the specific corrective administrative measures which appear to be quite obvious except in the case of the extremely complex personnel security clearance issue. However, the subcommittee feels very strongly that unless the military departments, and our military leaders in particular, choose to correct these problems caused largely by military administrative characteristics, the forces of logic and civilian scientific dissatisfaction could well dictate that research and development be rightly considered incompatible with military organization."

### **"SECURITY" HAS BEARING**

On the subject of "Security," the report states: "Although the issue of security clearance procedures and its effect on scientific and technical civilian personnel was not a specific area for the subcommittee inquiry, it was inevitable that this issue would be introduced into the hearings. ... Because it appeared to the subcommittee that this issue has a very important bearing on relationships between

(Continued on Page 4, Column 2)

## OPPENHEIMER REPERCUSSIONS

The 4 to 1 decision by the Atomic Energy Commission to deny security clearance to J. Robert Oppenheimer has raised in the minds of many scientists fundamental questions about the nation's security program and its administration. There appeared to be a general feeling that overly narrow interpretation of our security requirements may be hampering rather than protecting our military security vis à vis the Russians by discouraging free exchange of ideas among scientists and by rejecting the services of able men on grounds of 'security.'

**F A S COMMENT** In a statement issued July 5, the FAS Executive Committee said in part: "The case has re-emphasized disturbing and dangerous characteristics in the operation of the present security program. ... The majority's case... based itself on a handful of incidents... taken out of the context of a distinguished career and a record of brilliant, loyal service to the nation almost unmatched in its importance." The statement quotes Commissioner Smyth's dissenting opinion to the effect that "the evidence is singularly unimpressive when viewed in the perspective of the 15 years of active life from which it is drawn."

The statement concluded, "apprehensions arise out of certain self-defeating features of the security program itself. A program which, in the quest for 100% security, unnecessarily rejects the services of men of great talent ceases to serve its function properly. We call upon President Eisenhower to appoint a board of responsible citizens of various backgrounds, including scientists, to reassess the present security program. The negative aspects of 'security by exclusion' must be put in perspective against the positive aspects of 'security by achievement.'"

**OTHER REACTIONS** Oppenheimer's colleagues at the Institute for Advanced Study publicly affirmed their "confidence in his loyalty and patriotic devotion." All of the permanent members of the Institute staff signed the statement, expressing their "admiration for his magnificent public service."

The FAS Stanford Chapter deplored the "narrow interpretation of the security regulations shown by the majority of the AEC." It endorsed Commissioner Smyth's position that all of the facts must be interpreted with respect to the only pertinent question of whether Oppenheimer "would intentionally or unintentionally reveal secret information." The chapter concurred with Smyth that while "some of Oppenheimer's actions had been 'inexcusable,' he had protected for...over 10 years the secrets known to him" showing "essential regard for the present security system."

**BERKNER** Lloyd V. Berkner, operating head of Brookhaven National Laboratory, has written an excellent appraisal of the general problems brought into focus by the Oppenheimer case. His article (New Republic, July 12), is taken from a speech to the Amer. Society of Chemical Engineers. In it he analyzes exhaustively and soberly the pros and cons of our present extremely tight security lid on technological information. He also raises the question of whether our present personnel security clearance system may not be conditioning scientists to "avoid contact with any idea that may lead to military application. ... Scientists are no different from anyone else in desiring to protect their reputations. Once they are involved in secret matters, their reputations may be destroyed by any person who makes irresponsible charges. ... Clearance is not a permanent status, and a scientist's reputation is constantly susceptible to multiple jeopardy. ... During each clearance review his entire life comes under scrutiny, and any act of indiscretion that may have had no relevance to security at the time, may arise to damn him."

Berkner underlines the dangers of seeking 100% security 'by exclusion' in the following words: "An important concept in science is no less important to our national security because it is produced by one who cannot be 'cleared' by the arbitrary application of security procedures. We must not forget that Hitler and Mussolini abrogated their right to the atomic bomb when they drove a few leading scientists from their shores because they couldn't be cleared according to Nazi lights. Scientific greatness always arises from diversity of thought, never from conformity. Since the security procedures that support technological secrecy inevitably put a premium on conformity, they tend to prevent our nation's realization of the very greatness that we seek."

## LOS ALAMOS GROUP SUGGESTS SECURITY CHANGES

A "Statement of Views on a Balanced Personnel Security Program" was prepared by a committee of the FAS Los Alamos Branch and submitted July 16 to AEC Chairman Lewis L. Strauss during his recent visit there. The statement set forth a 6-point program of guiding principles, together with comments on Executive Order 10450 (Security Requirements for Government Employment). The committee's suggestions followed study of the Oppenheimer transcript and the Gray Board and AEC decisions. They called for a new approach to the problem of security, and attacked the "premise that the more demanding the standards of personal conduct, the better are the national interests served."

**6-POINT PROGRAM** The 6 "guiding principles" are suggested as a basis for amending the Presidential directive, to better safeguard the rights of government employees and to "promote the true security of the nation." The initial point calls for the maintenance of our national security through a balanced view -- "a combination of achievement, which contributes positively..., and secrecy, which contributes negatively. ... Potential contributors to positive security must not be eliminated except for the most compelling reasons of negative security."

The other points, in summary, call for: clearance of an individual unless it is determined there exists reasonable doubt as to his ability to meet the necessary requirements; careful limitation and explicit description of the reasons for upholding a charge of security risk; care that "guilt by association" is not allowed to outweigh all other convincing evidence of loyalty and discretion; reservation of the right of the individual to bring his technical and moral arguments, so labelled, to any discussion; explicit protection in the security regulations of the right to dissent.

The appended list of comments on Executive Order 10450 dealt principally with Section 8, which sets forth the types of information to which security investigations shall relate. The comments covered such items as: (a) the relevance of personal associations and the necessity of a reasonable approach to the problem; (b) membership in an organization prior to its designation as subversive, etc.; (c) the need for a clear definition of wilful acts against the US, in order to remove the fear of consequences of wrong decision, dissenting opinion, mistakes, etc.; (d) the general vagueness of the provisions of the order so that, if desired, "any individual could be branded as a security risk if the will to do so existed in the appropriate government quarters."

## PETERS CASE TO SUPREME COURT

The US Court of Appeals has upheld the dismissal of Dr. John P. Peters as a security risk by the National Institutes of Health (NIH). A distinguished professor of internal medicine at Yale and consultant to the Quartermaster Corps, Peters was cleared of loyalty charges by Federal Security Agency boards in 1949 and in 1952. Then in 1953 he was dismissed as special consultant to NIH after a third hearing initiated and held by the Loyalty Review Board of the Civil Service Commission, on charges supported by unsworn testimony of unidentified witnesses.

Peters' suit for reinstatement was submitted without formal briefs or oral arguments, and the adverse decision was expected, but sought in order to carry the case to the Supreme Court. His case is considered similar to that of Dorothy Bailey, government employee whose dismissal was upheld by the Supreme Court in 1951. That decision was, however, a 4-4 tie allowing the adverse decision of the lower court to stand.

## OPPENHEIMER DOCUMENTS

- Transcript of Hearing before Personnel Security (Gray) Board\* -- Gov't Printing Office, Washington 25, D.C. (\$2.75)
  - "Texts of Principal Documents & Letters" (including Gray Board decision; Nichols' recommendation to AEC against clearance; AEC majority and minority decisions, etc. -- GPO (\$ .25)
  - Nichols letter of Charges and Oppenheimer reply -- printed in full in N. Y. Times, Apr. 13 (Excerpted in FAS Information Bulletin #37, available on request from the FAS Washington Office)
  - Briefs on behalf of Oppenheimer: to Gray Board, May 17; to AEC, June 7 -- Write L. K. Garrison, 575 Madison Ave., N. Y. C.
- \*The Transcript proved a best-seller, and the first printing quickly sold out. A second printing makes copies again available.

**ATOMIC ENERGY BILL RECOMMITTED** (Cont. from Page 1). plants, "insofar as practicable." The last 3 words were added in conference, and were objected to by the Senate as a watering down of the amendment.

The original version of the bill reported out of the Joint Committee provided that all patents relating to atomic power production must be licensed at a fair royalty during the first 5 years following passage of the act. An amendment introduced by Sen. Kerr (D, Okla.) extended the compulsory licensing period to 10 years, but when referred back to the Joint Committee, this amendment was stricken out in favor of one providing for the licensing of patents only to those firms which agree to share their ideas and inventions. Objection to this form of the patent provisions was so strong in the Senate that the compromise version of the bill was rejected by a vote of 48 to 41.

**INTERNATIONAL EXCHANGE** The bill provides for the exchange of nuclear and byproduct materials, and of information concerning the peaceful and military utilization of atomic energy, with another nation or a regional defense organization, pursuant to the terms of "agreements for cooperation" to be negotiated for this purpose. Such agreements are subject to the approval of the AEC (and of the Defense Dept. if military matters are involved) and to review by the Joint Committee.

One section of the bill, inserted to further the President's atomic pool proposal, says that any treaty or executive agreement with a group of nations providing for international cooperation in the non-military applications of atomic energy (which would require Congressional approval) can be implemented only by "agreements for cooperation." Some members of the Committee objected that these sections of the bill unduly restricted the President's freedom to negotiate for international atomic energy cooperation by requiring Congressional review before specific agreements could be entered into. Attempts to amend these sections, however, were unsuccessful.

**INFORMATION AND SECURITY** Provisions of the new bill regarding information and security show some moves in directions urged by the FAS. The AEC is instructed to maintain a continuing review of restricted data in order to determine what can be declassified "without undue risk to the common defense and security." The AEC is also directed to set up standards to determine the extent of security investigations of personnel. These standards are to be based on the location and the kind of work of the employee, and are to depend on the importance of the material to which he has access. Present regulations require a complete security check of all individuals employed by the AEC, regardless of the nature of their work.

The bill as it now stands contains a section designating the Chairman as the "official spokesman" of the AEC. Although this apparently eliminates the objections that were raised to making the Chairman the "principal officer," some members of the Committee still think that such a designation of the Chairman's position in the law will have an undesirable effect on the administrative structure of the Commission. The bill also states that "each member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions..."

### RUSSIAN ATOMIC REACTOR

On June 30, the Soviet Council of Ministers announced that Russia had opened its first industrial atomic power station with a capacity of 5,000 kilowatts. Power from this atomic source was being used for industrial and agricultural needs in nearby regions, the announcement said. It could probably care for the needs of a village of 5,000 persons.

Both the US and Britain have started work on large capacity atomic plants to generate electricity for industry, but none is scheduled for completion for several years.

The Russian plant plainly is a pilot one, similar in nature and size to a number of experimental installations operated or being built by the AEC. The purpose of such pilot plants is less to produce electricity at the moment than to discover economical means for using atomic energy in industry.

## INFORMATION on VISA CASES Requested

The effects on science of US visa policies under the immigration act are being surveyed by a committee of the FAS Stanford Chapter. The committee requests that information about the following be sent to them to assist in their survey:

1. Individuals who wished to visit the US for professional reasons but who have been prevented from coming because of visa refusal or delay.
2. Individuals who received invitations to come to this country on professional business (e.g., to attend meetings, as a visiting lecturer, etc.) but who refrained from applying for a visitor's visa because of present visa policies.
3. Visitors who experienced visa difficulties after reaching the US.
4. Scientific congresses, meetings, or symposia which were not scheduled in the US because of current visa policies.

Information about such cases which have occurred in the past 2 years, giving as many details as possible, should be sent to the FAS Committee on Visa Problems, P.O. Box 1191, Stanford, Calif. In each specific case, the committee would like to know to what extent the information must be treated as confidential.

**DIRAC** Concern about these matters has recently been heightened by the denial of a visa to Professor Paul A. M. Dirac, of Cambridge University, who had planned to spend the academic year 1954-55 at Princeton's Institute for Advanced Study. Dirac was also to have spoken at the Columbia University bicentennial celebration. He was awarded the Nobel Prize for Physics in 1933 for his work on relativistic quantum theory.

Science News Letter of July 10 reports that in the past 2 years at least 50 foreign scientists, several equally as eminent in other fields as Dirac is in his, have been refused US visas. The total refused is probably many times this number, since only a small percentage of the visas denied are heard about in the US, according to this report.

**UNNECESSARY SECRECY?** When the 1st International Congress of Nuclear Engineering met recently at Ann Arbor, reports the Christian Science Monitor (June 26), it seemed apparent that a policy of "unnecessary secrecy" by the US is preventing it from assuming leadership in international atomic energy development. Foreign delegates seemed agreed that they had learned little new from the American scientists in this obviously peaceful field of non-weapons information, and described their attitude as "childish."

**BW SECRECY.** In an editorial in its August 2 issue, Chemical and Engineering News, the official organ of the Amer. Chemical Society, decries excessive military secrecy on bacteriological warfare as detrimental both to military progress in the field and related civilian defense preparation. The journal editorialized, "The department's refusal to mention its program, therefore, does not confuse any potential enemy, but it does keep the American public and American scientists in the dark."

The FAS is a national organization of scientists and engineers concerned with the impact of science on national and world affairs. The Newsletter is edited by members of the FAS Washington Chapter.

**MEMBERSHIP APPLICATION** -- Dues: Regular - \$5 (with income below \$2500 - \$3); Supporting - \$10; Patron - \$25. New membership and an introductory subscription to Bulletin of the Atomic Scientists - \$7.50 (with income below \$2500 - \$5.50).

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## FALLING OUT over FALL - OUT

The UN Trusteeship Council has been the scene of some post-mortems over the H-bomb tests of last March. A Marshallese school teacher -- flown to the UN by the US -- expressed gratitude for the many things that the US administration had done to improve the islanders' way of life but asked that the US exercise more care if further H-bomb tests have to be carried out.

In addition to this statement there were questions and complaints from the Syrian, Indian and Russian delegates. They questioned the legal right of the US to use trust territories in a way which would not promote the welfare of the natives. Syrian delegate Rafik Asha asked whether the H-bomb tests were in conformity with the peaceful purposes of the UN. In reply, US representative Mason Sears replied, "That's a kind of silly question. The delegate knows we can't stop our tests until the Russians stop theirs."

Resolutions to refer the matter to the World Court and to "invite" the US to desist from further tests were defeated, as was a resolution by France, Britain and Belgium which would in effect have recognized the authority claimed by the US to conduct such tests. In the course of the discussions, the US representative indicated that there would be further tests of nuclear weapons in the Pacific Islands Trust Territory.

### ATOMIC POOL

The United States is "making plans" to go ahead with President Eisenhower's atomic pool proposal despite the fact that the latest note from the Russians was "99% negative," Secretary Dulles told his news conference of Aug. 10. US plans, according to Dulles, would include association both with the countries which can contribute fissionable material and others "which would like to benefit from the program in terms of exploring and developing the possibilities of atomic energy for peacetime, life-giving purposes." Secretary Dulles did not offer any further detail on the plans for carrying out the atomic pool proposal.

**REWARDS FOR A-INFORMATION.** Attorney General Brownell, backed by the National Security Council, has proposed to Congress that the administration offer rewards of up to \$500,000 for tips on any enemy agents or other persons seeking to smuggle atomic weapons into this country or to manufacture them here. In addition, aliens who offered such information would be admitted permanently to the country without regard for the restrictions imposed by the McCarran Immigration Act. Sen. McCarran has announced that he is opposed to the measure, which he termed "dangerous" and "absurd." He stated in an interview that he did not "propose to allow Brownell to let anyone come to this country for a real or pretended disclosure of information" unless the immigration laws would permit it.

### F A S NEWSLETTER

Federation of American Scientists  
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### DEFENSE R & D SCRUTINIZED (Cont. from Page 1)

the military and the civilian scientists in defense research and development, it felt impelled to discuss the issue." Both Killian and VonNeumann testified that they considered this topic to be the most urgent and critical single problem in research and development programs today.

The FAS Executive Committee issued a press release on July 31, emphasizing the problems considered by the subcommittee and urging that its recommendations be given extremely serious consideration in military and other government organizations.

**DEFENSE REACTION** In the N. Y. Times of July 29, Elie Abel reported that "Donald A. Quarles, Assistant Secretary of Defense for Research and Development, acknowledged that a number of issues the report raised 'must be the subject of continuing attention and study in the Dept. of Defense.'" However, an article on the consequences of the Oppenheimer case, by Richard B. Dudman in the August 7 St. Louis Post-Dispatch, may be pertinent. It reports:

"Quarles acknowledged that alarm among the scientists presented a serious problem, but he questioned whether their alarm was entirely justified. ... Some of the scientists' statements are based on appearances -- or what they thought were appearances -- instead of on actual facts," he [Quarles] said. Quarles supports entirely the philosophy of the President's Executive Order No. 10450, under which government departments and agencies must open proceedings to determine the loyalty and reliability of any employee against whom there are allegations indicating his continued employment 'may not be clearly consistent with the interests of the national security.' As to how the order is being carried out, Quarles said there might be some abuses. He said the government had begun a study of the matter with a view to improving practices under the order and conceivably changing some details of the order itself."

Much detailed testimony and subcommittee comment is given in the House Report (H. Rept. No. 2618, available on request from the House Govt. Operations Committee, Capitol Bldg., Washington 25, D.C.). The report states that the verbatim proceedings of the hearings will be published pursuant to official action taken by the subcommittee.

**"GOVERNMENT AND SCIENCE: Their Dynamic Relation in American Democracy,** by Don K. Price; New York University Press; \$3.75. According to its fly-leaf, the book faces the problem, basic to our time -- "how to achieve the indispensable benefits of a government-supported science without also incurring the intolerable calamity of a government-controlled science." Price, former deputy chairman of the Defense Dept.'s Research and Development Board, is now an associate director of the Ford Foundation. In the federal Bureau of the Budget, he helped work on the legislative plans for the AEC and the NSF.



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## MEMBERSHIP DISCUSSION: IMPLICATIONS of the H-BOMB TESTS

The spring meeting of the FAS Council followed by only a few weeks the public announcements on the H-bomb tests in the Pacific and the resulting fears aroused at home and abroad -- not only because of the bigness of the bang but also the consequences of fall-out. The spirited discussion by Council delegates prompted several FAS policy drafts. None was adopted at the time and the matter was referred to the membership for further discussion pending possible action at the next Council meeting in November.

Members should send their agreement or disagreement with the views set forth on these pages, together with other relevant comment, to the FAS Chairman, M. Stanley Livingston, care of the Washington Office.

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### POLICY DRAFT BY M. S. LIVINGSTON

The unexpectedly large blast from the March 1 H-bomb test explosion, and subsequent international developments, require a re-evaluation of national policy. The Council of the Federation of American Scientists provides a forum for the opinions of scientists, who are especially competent to appreciate the technical implications.

US scientists in the Atomic Energy Commission have done an able job in developing the H-weapon to its present state, following the directives and policies of the Government. We respect their scientific judgment and conclusions. We believe, however, that the information made available to other scientists and the public is insufficient. This problem has implications of such magnitude that fears have been aroused because the information released is incomplete. Responsible government officials should release assurances backed by the most reputable AEC scientists on the following points:

- a) The biological danger due to radioactivity in fishlife in the test area can be made negligible in future tests, by suitable safety precautions on access to the test area.
- b) The increased radioactivity in the atmosphere due to a finite number of H-bomb tests is not a threat to inhabited countries or islands. The magnitude of the induced radioactivity and its effective lifetime need not be military secrets.
- c) The unexpected size of the March 1 blast was within the known limits of error in estimating the effects of an experimental test and did not represent any dangerously close approach to an uncontrollable atmospheric chain reaction. The scientists of the world deserve to have the technical facts and data on which this conclusion is based; they can only be reassured on this point by their own calculations.

Further H-bomb tests are of real concern to other countries, especially the friendly majority of the United Nations. They question our motives and our safeguards. If we hope for cooperation in solving other international problems, we must treat such other nations as equals and give them full information on further tests. We must not act unilaterally.

The magnitude of the threat of the H-bomb to the survival of civilization brings a new urgency to the problem of finding the formula for peaceful co-existence of nations. Increased effort is needed to explore opportunities for action in the areas of disarmament and of international control of atomic energy, through the United Nations organization. Russian awareness of the potential danger to civilization may be our biggest asset in searching for agreements leading toward enforceable world disarmament. A major step in this direction is President Eisen-

hower's assurance that we will not be the first to use atomic or hydrogen weapons, but reserve them for retaliation in the event of atomic attack on us or other friendly nations.

\* \* \* \*

### POLICY DRAFT BY D. R. INGLIS and H. RUSS

The increasing destructiveness of modern weapons impels responsible citizens to seek methods by which the armaments race may be halted. The magnitude of the atomic threat is dramatized by the new difficulty of finding testing grounds remote enough to avoid causing international difficulties, even in the vastness of the Pacific. While these troubles may be ameliorated in the immediate future by careful planning, there is legitimate room for concern over the growth of the testing problem and future effects on the biological environment of man. It would be in the national interest to allay international fears by releasing information concerning the results of H-bomb tests in a prompt and unified manner and as completely as is consistent with reasonable security considerations.

These far-reaching effects make it impossible to hide an H-bomb test from certain detection outside of national borders. This provides an opportunity for a primitive type of arms limitation agreement which does not require interference with internal affairs of a nation by international inspection. Vigorous diplomatic attention should be given to the possibility of an agreed-upon world-wide cessation of H-bomb tests and perhaps also A-bomb tests.

This would not be a mere "paper prohibition," for any violation would be detected by long-range monitoring. Such an agreement would not interfere with the stockpiling of weapons already developed. It would slow down the development of new and even more destructive weapons, and would do this equally for both contenders in the armament race. It would thus be no clear loss of military position to either side. The advantage of such an agreement to both sides is that by slowing the advancement of the techniques of massive attack, it would give defensive capabilities more chance to catch up. This would reduce the explosiveness of the international situation and provide a first definite step toward a more effective degree of arms limitation and eventual general disarmament.

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### POLICY DRAFT BY M. ROSENBLUTH

Various proposals have recently been made for a standstill in atomic armaments. One such proposal is for all nations to make a gentlemen's agreement to cease further production and stockpiling of fissionable material and further weapons development and testing. It has consistently been the position of FAS, the US, and the UN that disarmament without unrestricted inspection would be futile, and would probably amount to unilateral disarmament by the US.

A more attractive proposal calls merely for an agreement to hold no further test explosions. This proposal is based in part on an irrational feeling that the tests represent of themselves a great danger. On the contrary, the real danger is that the peoples and governments of the world, especially the Soviet government, do not seem to comprehend how catastrophic an atomic war would be. The tests serve to focus world attention on this point. For example, the recent tests have at least temporarily revived the moribund UN Disarmament Commission, and have apparently induced a more realistic attitude in Malenkov.

Another argument is that a ban on tests requires no elaborate inspection schemes, since test blasts can be detected at

great distances. This argument is probably valid, although a technical question arises as to whether detection could be avoided by such schemes as detonation far underground or under water.

More important is the fact that such a ban provides no measure of safety. The President has stated that our bombs are already as large as they need be. Moreover, it is now the position of the US and the UN, and this is supported by the most recent FAS Council statement on disarmament, that even total atomic disarmament would not suffice without corresponding bacteriological, chemical, and "conventional" disarmament. Therefore it is very hard to see the advantage of a scheme which at best, would only slow down further refinement of atomic weapons. It would only distract from the basic issue -- that the nations of the world must be willing to submit to international inspection in order to attain peace, and until they are willing to do so it is imperative that the US build up its deterrent and its defensive power.

Another point is that the standstill proposal seems by its timing, to be directed primarily against the United States and has been so interpreted by large segments of the press and the public.

Finally, the question may be raised whether it is useful for FAS to support particular small-step proposals for disarmament when these do not fall within the special competence of scientists. FAS' voice in such matters is a small one. On the other hand, there are important steps in which scientists can take the lead. One of these is the Bertrand Russell proposal for an international commission of scientists, perhaps under UNESCO, to explore in detail and to publicize the probable physical, biological, and psychological effects of all-out war. Such an impartial technical study, which could be made by scientists not connected with national weapons projects, is urgently needed so that the people and governments of the world may fully understand the present situation. Such a commission could later go on to consider the revolutionary advances in the world's economic conditions which science seems to promise in another few decades of peace.

We scientists have played a leading role in bringing mankind to the most fateful crossroads of its history. We have no special mandate to tell the world what path it should follow, but

we do have an urgent duty to present the facts so the proper decision can be made.

(An Indian proposal for a "standstill" on tests is also reproduced below, as one proposal for consideration.)

#### INDIA'S "STANDSTILL AGREEMENT" PROPOSAL

Speaking to the lower chamber of the Indian Parliament on April 2, Prime Minister Nehru made the following 4 proposals for international consideration. India put the Nehru proposals formally before the UN Disarmament Commission on April 8, when India's chief delegate, Rajeshwar Dayal, asked Secretary General Dag Hammarskjold to distribute copies to each member of the Commission.

"1. Some sort of what may be called a 'standstill agreement' in respect at least of these actual explosions, even if arrangements about the discontinuance of production and stockpiling must await more substantial agreement amongst those principally concerned.

"2. Full publicity by those principally concerned in the production of these weapons and by the United Nations of the extent of the destructive power and the known effects of these weapons, and also adequate indication of the extent of the unknown but probable effects. Informed world public opinion is in our view the most effective factor in bringing about the results we desire.

"3. Immediate and continuing private meetings of the subcommittee of the Disarmament Commission to consider the 'standstill' proposal which I have just mentioned pending decisions on prohibitions and controls, etc., to which the Disarmament Commission is asked by the general assembly to address itself.

"4. Active steps by states and peoples of the world who, although not directly concerned with the production of these weapons, are very much concerned by the possible use of them, also at present, by these experiments and their effects. They would, I venture to hope, express their concern and add their voices and influence in as effective a manner as possible to arrest the progress of this destructive potential, which menaces all alike."

## PUBLISHED VIEWS

Harvard Law Professor David F. Cavers introduced a proposal -- in essence a standstill agreement covering all types of armaments -- at a conference on World Disarmament and Development in New York last March 26. The present danger, as Cavers sees it, lies not so much in the existing levels of armaments as in the continuous struggle to gain superiority. A standstill agreement would provide that there be no increase in armaments of any character for a stated period, only replacements of existing arms and installations being allowed. An arms census would not be required. The military status quo would not be changed. A minimum of international inspection would be required.

Cavers believes the Russians might listen to such a proposal for 2 reasons: (1) they do not enjoy the economic strain of the present armaments race any more than we do; (2) a standstill agreement would prevent German and Japanese rearmament. Cavers points out, "The Soviet Government may be confident that the United States would not start a world war. I doubt they would have the same confidence in a rearmed Germany..."

Carey McWilliams, in summarizing Cavers' views in The Nation of April 17, comments that if the checking of German rearmament would freeze Russian arms at their present level while at the same time permitting some break in the iron curtain, the net result would more than compensate for the abandonment of EDC. If a standstill agreement could be achieved now, time might be gained to create a special high-level commission in this country to study a bolder and more imaginative disarmament proposal. Says McWilliams, "...in a world in regression, to stand still is to move forward."

In an article in The Nation of July 24, David R. Inglis, physicist at the Argonne National Laboratory, outlines the requirements for a disarmament agreement that might prove acceptable to the US and USSR. These are (1) "that it provide each nation with assurances that as arms reduction is carried out, the other side will not at any stage gain a temporary advantage," and (2) "that it offer the certainty that no arms cache of dangerous proportions has been secreted. The compact nature of atomic armaments makes this a very tough problem. Once carefully hidden, they cannot be found with certainty by any practicable search of a country."

The danger of a hidden stockpile of A-bombs," Inglis points out, "is of course increased by the possibility that they might be converted into H-bombs. How much it is increased is veiled in secrecy, for we do not know how many A-bombs, or their equivalent in atomic materials it takes to make an H-bomb. This is one of the reasons why a very thorough study is needed at high level to determine whether a disarmament agreement is technically possible." In this connection, Inglis states, "our country should have a high-level group of imaginative thinkers, perhaps a successor to the State Department Panel on Disarmament of 1952, at work on the problem of devising and evaluating possible reasonable agreements in all details."

Noting that the various requirements show "how intricate a matter it is to write an adequate arms-limitation or disarmament proposal," Inglis says it is likely "that, if the arms race can be stopped at all, it will be by an agreement on some imperfect degree of arms limitation, a vigilant truce in the arms contest... rather than a plan for complete and universal disarmament."